

ASSIGNMENT 7

Textbook Assignment: "Tubing Fabrication and Maintenance," chapter 6, pages 6-1 through 6-30.

7-1. What number tubing has an outside diameter of 3/8 inch?

1. No. 6
2. No. 8
3. No. 10
4. No. 12

IN ANSWERING QUESTION 7-2, REFER TO TABLE 6-1 IN THE TEXTBOOK.

7-2. Which of the following types of corrosion-resistant steel tubing should be used when temperatures will exceed 1250°F?

1. MIL-T-6845
2. MIL-T-8504
3. MIL-T-8606
4. MIL-T-8973

7-3. What aluminum alloy tubing is authorized for the repair or replacement of any aluminum line?

1. 5052
2. 5052-0
3. 6061-T4
4. 6061-T6

IN ANSWERING QUESTIONS 7-4 THROUGH 7-6, REFER TO TABLE 6-3 IN YOUR TEXTBOOK. SELECT FROM COLUMN B THE COLOR FOR THE AN/MS TUBE FITTING MATERIAL LISTED IN COLUMN A. NOT ALL ITEMS IN COLUMN B WILL BE USED.

A. MATERIAL	B. COLOR
7-4. Corrosion-resistant steel	1. Cadmium-plate
7-5. Aluminum-bronze	2. Blue
7-6. Aluminum alloy	3. Black
	4. Natural

7-7. When fabricating tube assemblies, you should refer to what manual?

1. NAVAIR 01-1A-8
2. NAVAIR 01-1A-17
3. NAVAIR 01-1A-20
4. NAVAIR 01-1A-509

7-8. A standard tube cutter should be rotated in what direction?

1. Clockwise
2. Counterclockwise
3. Toward its open side
4. Toward its closed side

7-9. If neither a standard or Permaswage tube cutter is available, you should use what tool to cut a tube?

1. Nippers
2. Hacksaw
3. Hand shears
4. Bolt cutter

7-10. In what direction is the Permaswage deburring tool rotated?

1. Clockwise
2. Counterclockwise
3. Toward its open side
4. Toward its closed side

7-11. When a tube is deburred, with a Permaswage deburring tool, the chamfer should NOT exceed what total amount of the tube's wall thickness?

1. 1/4
2. 1/3
3. 1/2
4. 2/3

7-12. On a hand tube bender, 0 to 180 degrees of bend is marked on what component?

1. The clip
2. The handle
3. The slide bar
4. The radius block

7-13. The mechanical tube bender is equipped to bend tubes from what minimum to maximum diameter?

1. 1/4 to 3/4 in.
2. 1/16 to 3/4 in.
3. 5/16 to 13/16 in.
4. 3/16 to 15/16 in.

7-14. Fusible alloy QQ-F-838 should be used to pack tubes made of which of the following materials?

1. Titanium
2. Carbon steel
3. Aluminum alloy
4. Stainless steel

7-15. There are a total of how many types of flared tubing joints?

1. One
2. Two
3. Three
4. Four

7-16. A brake line made of corrosion-resistant steel should have which of the following types of flares?

1. Single flare only
2. Double flare only
3. Single or double flare
4. Triple flare

7-17. You are preparing to double flare a tube by placing the tube into the die block. What prescribed length of tube should protrude beyond the countersunk end?

1. 1/8 in.
2. 1/4 in.
3. 1/3 in.
4. 1/2 in.

7-18. In case of an emergency, an aluminum flareless-tube connector may be used as a presetting tool what total number of times?

1. One
2. Two
3. Three
4. Four

7-19. When a flareless fitting is preset, the sleeve is positioned on the tube in what manner?

1. The pilot and cutting edge of the sleeve point toward the end of the tube
2. The pilot and cutting edge of the sleeve point away from the end of the tube
3. The pilot points toward the end of the tube, and the cutting edge of the sleeve points away from the end of the tube
4. The pilot points away from the end of the tube, and the cutting edge of the sleeve points toward the end of the tube

IN ANSWERING QUESTIONS 7-20 THROUGH 7-23, REFER TO TABLE 6-4 IN THE TEXTBOOK. SELECT FROM COLUMN B THE THREAD LUBRICANT FOR THE SYSTEM LISTED IN COLUMN A.

	A. SYSTEM	B. LUBRICANT
7-20.	Freon	1. MIL-H-5606
7-21.	Hydraulic	2. MIL-G-4343
7-22.	Oil	3. MIL-O-6032
7-23.	Pneumatic	4. MIL-L-6085A

7-24. The sleeve of a flareless fitting is allowed to move lengthwise what maximum amount?

1. 1/16 in.
2. 3/64 in.
3. 1/32 in.
4. 1/64 in.

IN ANSWERING QUESTION 7-25, REFER TO TABLE 6-5 IN THE TEXTBOOK.

7-25. The tube projection from the sleeve pilot to the tube end of a No. 12 tube should be approximately what length?

1. 7/64 in.
2. 5/32 in.
3. 11/64 in.
4. 7/32 in.

IN ANSWERING QUESTION 7-26, REFER TO TABLE 6-6 IN THE TEXTBOOK.

7-26. One-fourth inch 6061 aluminum tubing should have what minimum inside tube diameter?

1. 0.060 in.
2. 0.095 in.
3. 0.150 in.
4. 0.180 in.

7-27. According to NAVAIR 01-1A-20, a tube assembly that has an operating pressure of 3,000 psi should be proof pressure tested to what maximum pressure?

1. 3,000 psi
2. 6,000 psi
3. 9,000 psi
4. 12,000 psi

- 7-28. Tube assemblies must be cleaned after fabrication. What is the preferred cleaning material for hydraulic lines?
1. Isopropyl alcohol
 2. P-D-680, Type II
 3. MIL-T-81533
 4. MIL-C-81302
- 7-29. Special precautions required for testing and cleaning oxygen tube assemblies can be found in MIL-STD-1359.
1. True
 2. False
- 7-30. The interior tube assemblies of an aircraft require what type of protective finish?
1. One coat of epoxy polyamide primer
 2. Two coats of zinc chromate primer
 3. One coat of aliphatic polyurethane paint
 4. Two coats of nitrocellulose acrylic lacquer paint
- 7-31. With some exceptions, identification tapes are NOT applied to lines less than what maximum diameter?
1. 1 in.
 2. 2 in.
 3. 3 in.
 4. 4 in.
- 7-32. The function of a line is identified by a 1-inch-wide tape that contains words, colors, and symbols. When color codes are used to identify the line function, at what location are they found on the tape?
1. One-half the total width on the left side of the tape
 2. One-half the total width on the right side of the tape
 3. Three-fourths the total width on the left side of the tape
 4. Three-fourths the total width on the right side of the tape
- 7-33. What total number of general classes of hazards are found in connection fluid lines?
1. Seven
 2. Six
 3. Five
 4. Four
- IN ANSWERING QUESTION 7-34, REFER TO TABLE 6-9 IN THE TEXTBOOK.
- 7-34. Which of the following hazards is associated with the use of oils and greases?
1. FLAM
 2. AAHM
 3. PHDAN
 4. TOXIC
- 7-35. What type of lines alternately carry pressure and return fluid from an actuating unit?
1. Return lines
 2. Supply lines
 3. Pressure lines
 4. Operating lines
- 7-36. At the organizational level, you are NOT allowed to perform which of the following maintenance actions on tube assemblies?
1. Repair
 2. Inspection
 3. Fabrication
 4. Replacement
- 7-37. A tube assembly has a dent with a depth of less than 20 percent of the tubing diameter. The dent is unacceptable if it is in which of the following locations?
1. A straight section of tubing
 2. The heel of a short bend radius
 3. A section of tubing with a diameter of less than one-half inch
 4. A section of aluminum tubing carrying pressures greater than 500 psi
- 7-38. An aluminum alloy tube assembly that carries a pressure of 1,500 psi has a scratch greater than 15 percent of the wall thickness. Which of the following maintenance actions should you take?
1. Replace the tube assembly
 2. Replace the scratch by welding
 3. Rework the scratch by machine-burring
 4. Rework the scratch by burnishing with hand tools
- 7-39. When installing a tube assembly, you should cover disconnected nonsealed joints with what type of sealing material?
1. MIL-S-8802
 2. MIL-S-83430
 3. MIL-s-81733
 4. MIL-S-38249

7-40. If a steel-flared tube assembly leaks after it has been tightened to the proper torque, what additional amount of tightening, if any, is allowed beyond the noted torque?

1. 1/2 turn
2. 1/8 turn
3. 1/16 turn
4. None

7-41. When installing flareless tube assemblies, you should tighten the nut, if accessible, by which of the following means until resistance to turning is felt?

1. Hand
2. Open-end wrench
3. Split-box wrench
4. Slip-joint pliers

7-42. All hydraulic tubing should be supported from rigid structures by which of the following methods?

1. Sleeves
2. Support clamps
3. Nylon strap ties
4. Flexible grommets

IN ANSWERING QUESTION 7-43, REFER TO TABLE 6-10 IN THE TEXTBOOK.

7-43. What is the maximum allowable distance between supports for a 3/8 inch outside diameter aluminum alloy tube assembly?

1. 12 in.
2. 16 1/2 in.
3. 20 in.
4. 27 1/2 in.

7-44. What are the two categories of tube repair?

1. Splice and replace
2. Splice and emergency
3. Temporary and rework
4. Temporary and permanent

7-45. An annular tool should be used to correct which of the following types of minor damage?

1. Crossed threads
2. Orifice restriction
3. Damaged wrench pads
4. Damaged or ridged seats

7-46. Permaswage fittings are designed for use at what level(s) of maintenance?

1. Depot only
2. Intermediate only
3. Organizational and intermediate only
4. Organizational, intermediate, and depot

7-47. You are repairing a tube assembly using Permaswage fittings and techniques. This is considered what type of repair?

1. Splice
2. Temporary
3. Permanent
4. Emergency

7-48. The Permaswage tube repair equipment consists of what two series?

1. D1000 and D1230
2. D1100 and D2000
3. D10000 and D12200
4. D10000 and D20000

7-49. What total number of components are in a Dynatube fitting?

1. Five
2. Two
3. Three
4. Four

7-50. What tools should be used to support and position Dynatube fittings during swaging?

1. Finger dies
2. Finger collars
3. Holding fixture dies
4. Holding fixture collars